RESEARCH ARTICLE

FACTORS INFLUENCING THE USE AND TYPE OF MEDIA RESOURCES FOR TEACHING/LEARNING IN THE MOI UNIVERSITY SCHOOL OF PUBLIC HEALTH

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ARTICLE INFO

ABSTRACT

This paper is based on a study to identify the type of media resources used in instruction and to examine the factors influencing the use of media resources in the School of Public Health at Moi University. Survey research design was employed in order to cover the study population of all the lecturers and students. Therefore, 24 lecturers and 213 students were chosen, making a total of 237 respondents. Convenient sampling technique was used to select key informants. Data were collected using questionnaire, interview schedule and observation checklist. The data collected was coded accordingly and analyzed using the Statistical Package for Social Science (SPSS v. 12). The results were presented using descriptive statistics. The findings showed that technological factors, individual factors and organizational factors influenced the use of media resources. Based on these findings, the study recommended that the School formulates sound procedures which would guide the procurement, use, maintenance of Media resources, as well as establish an instructional Media Centre. Further research should also be done before adoption of media resources and on e-learning, plus streaming the Media in the School of Public health.

INTRODUCTION

One of the major development challenges confronting Africa today is the need to develop capacities, strategies and mechanisms necessary to take full advantage of the opportunities offered by media resources. Given the potential for media resources to induce changes, many development analysts believe, these materials can play an important role in educational development process. It is generally believed that media resources can offer real opportunities to improve the quality of instruction. It is also important to examine the challenges encountered when introducing and using media resources in instruction. Generally, teaching and learning process is enhanced by the use of instructional media. The process of adoption and diffusion of media resources in education in Africa is in transition. There appears to be the beginnings of a marked shift from a decade of experimentation in the form of donor-supported, NGO-led, small-scale, pilot projects towards a new phase of systemic integration, informed by national government policies and multi-stake-holder-led implementation processes. One of the primary features of this new phase is the priority that governments are giving to policy development regarding media programmes. Several African countries for instance, already have a national media resources policy in place or under development. Currently, nearly half the countries have chosen to develop media resources policy that is specifically relevant to the education sector (African Technology Development Forum,

2007). Thus the new phase of media resources for education in Africa is occurring within national and emerging regional policy frameworks that are providing the basis for partnerships and donor participation. During the last decade, the increasing adoption of the internet by organizations and individuals has contributed to Kenya's ability to view the world as a global village, reducing the spatial-temporal separation between different regions of the world and enabling various forms of information to be freely and quickly diffused and exchanged. The diffusion of information and communication technology has, thus, witnessed an upsurge in recent years. However, the rate of adoption across countries diverges considerably regardless of the income levels.

In Kenya, the National Information and Communications Technology Policy is a product of the Economic Recovery Strategy for Wealth and Employment Creation (2003-2007) developed by the Ministry of Information and Communications in January 2006. The Common Market for Eastern and Southern Africa (COMESA) model was adopted by COMESA Council of Ministers in March 2003. This policy aims at encouraging sustained economic growth and poverty reduction, promoting social justice and equity, mainstreaming gender in national development, empowering the youth and disadvantaged groups, stimulating investment and innovation in media resources to achieve universal access. In general, this policy addresses market structure, policy objectives and targets, implementation strategies, universal access, broadcasting, telecommunications, radio frequency spectrum, postal services and institutional framework for Information

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Communication Technology (IT). It has also been observed that one of the key catalysts in the attainment of the Millennium Development Goals (MDGs) is inclusive access to and effective use of Information and Communication Technologies (media resources) by the entire populace of every country on the globe. Universal access and service have emerged as key strategies that governments are using in their attempts to bridge the digital divide within their countries and with the rest of the world. In general, the term "universal access" has come to be associated with enabling every person to have access to necessary media resources within a given distance for enhanced information and educational communication. This is notwithstanding the fact that the adoption of media resources at any level or sector of the society varies because of their unique conditions and experiences.

In Kenya, the Ministry of Education, Science and Technology (MoEST) was one of the initial beneficiaries of the adoption and use of media resources, especially at the higher education levels of universities, polytechnics, colleges and other tertiary institutions. However, the private and public universities, in particular, have been on the forefront when it comes to adoption and use of media resources in instruction. According to the Daily Nation (2009), Kenya has 27 universities of which seven are public and chartered. In addition, there are 20 private universities of which four have received charter and three have letters of interim authority. Most of these universities are concentrated in few of the eight Provinces of Kenya. Rift Valley Province has several of the chartered private and public universities. These are: Egerton University and Moi University which are public, while Kabarak University and Baraton University are privately owned. Other public universities are University of Nairobi, Kenyatta University in Nairobi Province and Jomo Kenyatta University of Agriculture and Technology in Central Province. In addition, there are also Maseno University (public) is in Nyanza Province and Masinde Muliro University in Western Province. Other chartered private universities in the country include Catholic University of Eastern Africa, the United States International University and Daystar University – all situated in Nairobi Province. In addition, there are Methodist University in Meru and the African Inland Church University in Machakos, both in Eastern Province. Demand for university education in Kenya far exceeds the available places for all students who qualify for university admission. Despite the fairly large number of established universities in the country, there are 15,000 Kenyan students studying abroad. The public universities in Kenya can only accommodate slightly over 16,000 students annually, while the student population that meets the basic university entry requirements in the Kenya Certificate of Secondary Education exceeds 60000 (The Standard, 2007). Currently, higher education in Kenya has been experiencing myriads of challenges, ranging from the surging numbers of students, financial constraints, changes in curriculum and teaching/instruction strategies to competition from other regional institutions. One of the options out of these challenges has been the adoption and adaptation to modern media resources in the teaching and learning process. Accordingly, various media resources have been used with varied levels of effectiveness. Moi University is a public university with seven campuses, namely the Main Campus in Kesses, Chepkoilel Campus, Eldoret west, Annex, Town,

Kabianga and Narok Campuses. In addition, there are nine Satellite campuses in Kitale, Rongo, Kericho, Yala, Kagochi, Mombasa, Tambach, Garissa and Nairobi. The Town campus has the School of Medicine, School of Dentistry and the School of Public Health, which is the focus of this study. This School of Public Health was established in 1998 as the Institute of Public Health to run the Master's degree in Public Health among other short courses. Later on in July 2006, during the reorganization of the University into schools, the Institute of Public Health was renamed School of Public Health. The school has three (3) departments, namely Health management, Epidemiology and Environmental Health.

The philosophy of Moi University, which is embodied in the School of Public Health mission, is to produce graduates who are well equipped with appropriate, practical and intellectual skills to meet the needs of the present and future peoples of Kenya. The competence of the graduates is mainly acquired through the use of effective teaching and learning strategies, including media resources in instruction. However, Kafu (1976) and Amri (1993) observe that media resources are often under-utilized, stored away in dark cupboards, remote stores or locked in offices, and that staff turn-over creates loss of trace for media resources. It is on the basis of this background that this study sought to examine factors that determine media resource use in instruction in the School of Public Health of Moi University, Kenya.

Critical issues on the use of media resources in instruction

Many governments, including Kenya, recognize the use of media resources in schools. This is because using media resources in the classroom is no longer an option but a necessity. Many international organizations as well as the private sectors have supported the Kenya government's initiative to provide media resource infrastructure in the seven Public Universities. However, a review of literature reveals that lecturers, especially in the Public universities in Kenya, are not integrating media resources into instruction as teaching tools, and where media resources are used, the extent of usage is not only varied but also not consistent (Ndiku, 2003; Omwenga and Rodrigues, 2006). Furthermore, evidence adduced by Momanyi *et al*. (2006) shows that there is a need for studies to be done on factors that determine the adoption and use of media resources in teaching and learning process. This study sought to fill that gap by examining the determinants of media resources in instruction process in the School of Public Health at Moi University. In addition, practical observation has shown that the teaching and learning process at the School of Public Health integrates the traditional mode of teaching that does not involve the use of media resources. However, efforts have been made to encourage the use of modern media resources in the teaching and learning process with dismal success. Hence, the need to investigate factors behind the low level usage of the media resources in the teaching and learning process, especially for schools that have adopted Innovative medical Education strategies for teaching the undergraduate and post graduate students. Fletcher (2006) and Kadzera (2006) observe that lecturers who use the media technologies effectively will inevitably raise their quality of teaching experience. Furthermore, if students are to become competent users of different media technologies in their own classes, then they

need to see their lecturers use the various media technologies in their instruction. Several scholars, among them, Rogers (1995), Gladhart (2001) and Chandler (2005), show that meaningful integration of media technology undergoes five stages of familiarity, foundation, fusion, transformation and facilitation. Perhaps most of those lecturers who shun the use of media resources are in the familiarity stage. These stages provide a template for factors that would enhance the level of use of media resources in the implementation of the curriculum. Unfortunately, in Kenya, the factors influencing the level of media resources, adoption and integration in teaching and learning process are not yet scientifically and exhaustively established. Yet, data that provide insight into level of adoption, integration and transmission of media resources in the delivery of instruction would be helpful in planning and implementing appropriate curriculum strategies in the institutions of higher education. In fact, there has not been sufficient research to monitor the progress of this work in Kenya. The purpose of this study was to examine the extent of media resources use in instruction in the School of Public Health. This is important not just for knowledge creation but also in provision of critical information for policy formulation in the use of media resources in the process of instruction.

Availability of media resources

A variety of media resources should be available, adequate and accessible to lecturers and students in order to support teaching and learning objectives.

Selection of media resources

Curriculum objectives may provide guidance to the type of media resources needed to support teaching and learning. McGaghie (1978) recommends the establishment of study disciplines and their respective instructional media resources to serve the objectives. The curricula for the undergraduate and post-graduate programmes of this study have teaching blocks with no indication of respective instructional media resources to serve the objectives. Gerlach (1971) recommends that a medium of instruction must be selected on the basis of its potential for attaining a stated objective. Again, the media resources should be selected for its appropriateness, availability, technical quality and level of sophistication. In addition, O'Neal (2003) emphasizes that media choices for each objective must be qualified by cost, availability and practical considerations of implementation within curriculum context.

Access to media resources

Brusca (2002) argues that potential multi-media developers need access to video and audio production equipment such as cameras, recorders, microphones, editors and figureics production tools, like scanners, tablets and utility systems such as CD recorders plus tape back-ups. In this way, the system should be integrated in order to gain experience in its use. Furthermore, one should consider maintenance, servicing, storage and inventory of media resources. This is supported by Amri (1983) who recommends the need for making the inventory of media resources for recording movement and change of stock in order to facilitate availability and utilization. The status of the media inventory for the two

programmes will be determined by this study. Erickson (1968) further suggests that media resources should meet the following criteria:

- Be placed under specialized centralized leadership.
- Publicly accessible and supported.
- Provide a variety of media resources for teachers.
- Conducted in a conducive environment.
- Included in the strategic plan for the improvement of quantity and quality. Again, Mullally (2005) observes that the design and evaluation of media resources involves the application of relevant theories, including:
- Perception theory (learners are better able to visualize message).
- Learning theory (information is retained).
- Communication theory (learners willing to receive messages).
- Systems theory (learners are problem solvers).

Generally, any educational media is only as effective as the delivery of the message it is intended to communicate.

Importance of library and information services

The importance of library and information resources as the main media of teaching and learning in any Medical Education institution of higher learning needs not be emphasized. The primary purpose for library and information resources is to support teaching, learning and research through printed material or technological storage devices. In addition, adequate resources and services appropriate for the degree offered should be available in order to support the intellectual, cultural and technical development of the students. These include sufficient holdings, equipment, personnel, media resources, production centres, computer centres, networks, telecommunication facilities and other repositories. The resources should be available in quality, level, depth, breadth, diversity and currency to meet the requirements of the educational programme. The policies, regulations and procedures for systematic development and management of information resources in all formats should be documented, updated and made available to the users. In addition, co-operative arrangement with other library and information resources, including documented agreements, should be established in order to complement the institution's own adequate and accessible core collection and services. Lastly, the institution should regularly and systematically evaluate the availability, quality, adequacy and use of the library information resources and services, including those in co-operative arrangements.

Innovative media resources

Brusca (1995) observes that attention spans of students are decreasing in most learning environments and, therefore, innovative instructional materials should be stimulating, interesting and must engross the learner in the subject matter. Currently, the use of interactive multi-media and other technology-based media satisfy some of these challenges. According to Microsoft Encarta (2002), the emergence of inexpensive computer technology and mass storage media, including optical video discs, compact discs and flash discs, has greatly improved instructional media technology. In

addition, availability of innovative media resources for teaching and learning should be considered in terms of quantity, relevance, accessibility, currency, versatility, appropriateness and affordability, level of sophistication, capacity and supportive environment. Mutema (1992) observes that computers, which are extensively used in developing countries, are increasingly used in urban areas where most of the institutions of higher learning are located. It may be useful to note that high technology is currently being used for innovative strategies such as tele-medicine and informatics. This facilitates quick transmission of medical data and information useful not only for medical diagnosis and patient management but also for the purpose of innovative medical education which ensures informed and highly competent health professionalism.

Financing for media resources

Spence and Humphrey (2005), while supporting South (2000), observe that integration of communication and information technologies is cost effective and competitive in the delivery of educational courses. However, this requires highly skilled computer and communication technologists. These scholars further argue that obtaining funding for instructional technology is a challenge facing colleges across Alberta. Rather than relying on government funding, some colleges opt for cost-recovery to fund the integration of media technology into college courses. This means that potential clients inside or outside the college can access the departments if they are able to pay for the services.

Maintenance of media resources

Erickson (1968) and Kafu (1976) observe that audio-visual media resources should be maintained in optimum condition to avoid deterioration. Teachers lose interest quickly when the materials they receive are worn out, dirty or break during utilization. They further advise that air-conditioning for media stores may be the most important of all care essentials. Therefore, maintenance of media stores in the institutions of higher learning is crucial to effective teaching and learning for all academic programmes.

MATERIALS AND METHODS

The study adopted a survey design. It was carried out in the School of Public Health of Moi University which is situated in Eldoret Town near Moi Teaching and Referral Hospital. The target population comprised students and lecturers at the School of Public Health. The entire lecturer population, both the full-time and part-time lecturers, and of postgraduate and undergraduate students was used. The tools used were structured questionnaires, interview schedules and observation checklists. The data collected was coded accordingly to facilitate analysis. The data was then transferred into the computer Excel spreadsheet and analysis was carried out using the Statistical Package for Social Sciences (SPSS-version12). Using the SPSS package, data sets were generated to facilitate discussion and interpretation. The summaries of descriptive statistics in the form of figures and tables on responses were obtained using the means, percentages and frequencies and standard deviation of various parameters.

RESULTS AND DISCUSSION

Type of Media Resources Available

The first objective of the study was to identify the type of media resources available in the School of Public Health. The teaching and learning process is enhanced by the use of instructional media resources which are used to assist learners in acquiring knowledge, skills and attitudes. Therefore, availability of media resources in any learning institution is a great advantage to both students and lecturers in the current society. When respondents were asked to state whether Media resources were available in the School of Public Health, it was established that projected and non-projected media resources were available in varying degrees as described in the foregoing.

Projected Media Resources

Projected media resources are learning equipment used by casting on a screen or other surface an image on film or slide by the use of projectors. The study sought to establish types of projected media resources available in the School of Public Health. It is observed that over-head projector with a frequency of (24.4%), LCD-projector (24.4%) and their accessories were much more available than other projected media resources. This was followed by slide projector (16.5%) and video projector (10.3%). Currently, over-head projector, LCD-projector and internet computers are common types of media resources used in teaching and learning in modern technology. Therefore, lecturers and students should use them in order to improve teaching and learning.

The Level of Availability of Projected Media Resources

The respondents were asked to rank the level of availability of projected media resources. They gave responses in the order of models (15.7%) and white boards (15.7%), print texts (14.2%), real objects (7.8%), news prints (6.3%) and finally, audio tapes (3.1%). The chalkboards and print visuals were readily available because they are cheap and easy to maintain using modified Likert scale. Further results showed that over-head projectors were ranked first with a mean value of 3.18; LCD projectors were ranked second (2.65); slide projectors were third (2.39); internet computers were fourth (2.24) while video projectors were ranked fifth (1.91). As a result, the extent of availability of over-head projectors was high as compared to other projected media resources found in the School of Public Health. Overhead projector was commonly available since it is easy to use than LCD and slide projectors. This gadget meets the criteria for selection proposed by Gerlach (1971); that a medium of instruction should be selected for appropriateness, availability, technical quality and level of sophistication. Video projector, on the other hand, is cumbersome and, in cases where the screen is small, it is not suitable for teaching a large class. Internet computers require that everybody has a computer so that lecture notes are relayed through e-mails and other tutorials. This is an expensive and highly technical process of teaching and learning.

Non-Projected Media Resources

The study also sought to establish the types of non-projected media resources available in the School of Public Health for use by lecturers and students. From the responses, chalkboard with a frequency of (18.6%) and printed visuals (18.6%) were the common types of non-projected media resources available for use.

The level of Availability of Non-projected Media Resources

This question was analyzed using the mean to identify the rank of each attribute. As a result, it was established that chalk boards were available as they were given the first rank by the respondents. From the results, chalkboard was ranked first with a mean value of 3.76; print visuals was second (3.10); white board was ranked third (2.90); model was fourth (2.29); print texts was ranked fifth (2.27); real objects were ranked sixth (1.68); news print (1.44) and finally, audio tape (1.17). As a result, it was established that chalk boards was more available than other types of non-projected media in the School of Public Health. This was so because chalk board plays a vital role as far as learning and teaching are concerned and therefore they are planned and fixed in every classroom and laboratory immediately after or during construction. In addition, chalk boards are readily available because they are cheap and easy to maintain compared to real objects, models and printed texts. This agrees with O'Neal (2003), that media choices for each objective must be qualified by cost, availability and practical consideration for implementation. Supporting this finding, Amri (1983) and Erickson (1968) suggest that there should be an inventory of media resources for determining their circulation and change of stock in order to facilitate availability, accessibility and usage. Respondents also agreed that print visuals, like charts were available. While models, print texts and real objects were fairly available. Perhaps audio tapes were not available because they require competence to use them.

Factors Influencing Media Resources Use

The second objective of the study was to examine the factors influencing the use of media resources at the School of Public Health. This was measured by looking at individual factors, organizational factors and technological factors.

Individual Factors

There are a lot of personal issues which can determine the use of media resources in any institution of learning. As such, the study sought to find out individual factors that influenced adoption and usage of media resources. This question was analyzed by using the mean values to identify the rank for each attribute. It was established that exposure, educational level and literacy on media resources among other factors influences media resource adaptation. From the results, exposure was ranked first with a mean value of 4.11, educational level was ranked second (3.95), literacy on media resources was ranked third (3.94), knowledgeability was fourth (3.86), personal preference was fifth (3.78), age was ranked sixth (3.68), personal attitude was seventh (3.53), teaching experience was eighth (3.30), innovativeness was

ranked ninth (2.69) while gender was ranked tenth (2.25). As a result, respondents agreed that exposure, educational level, literacy on media resources, knowledgeability, personal preference, age and personal attitudes influenced the adoption and usage of media resources in the University. Exposure to media resources is very vital as it increases one's level of confidence in using media resources. It cultivates appetite and curiosity in an individual who feels the need of using those media resources.

Educational level plays another important role as far as adoption and usage of media resources in the University is concerned. When one is educated, s/he will find it very interesting using media resources than uneducated individual. In fact, the more educated an individual is, the higher the chances of using media resources. Literacy on media resources motivates an individual to adopt and use media resources. Literacy can be obtained through training where an individual is educated on how to use and operate media resources. One is confident using media resources when s/he knows what to do. Personal preference, on the other hand, depends with one's choice. An individual may choose to or not to use media resources. A person with high preference on media resources is more likely to adopt and use them than one with low preference. Moreover, the young upcoming generation is more likely to embrace the adoption and use of media resources than the aging population. This is because young people are more eager and want to know much about new ideas than old people.

Teaching experience may not be used to determine the adoption of media resources, especially when the teacher/lecturer does not use projected media resources like overhead projector in class. This means that no matter how many years one has taught without using overhead projector, one will never know how to use it. On the other hand, the same teacher/lecturer will be familiar with the non-projected media resources, like white and chalk boards which are used daily. Respondents said that gender did not influence usage of media resources. A close scrutiny of the above factors indicates that exposure, educational level, literacy on media resources, knowledgeability, personal preference, age and personal attitudes influences the adoption and usage of media resources in the University. This observation agrees with the concerns of Cottrell (1999) who outlined the factors affecting encoder, message, channel, supportive environment and decoder of Human Communication Theory.In addition, Ajuong (2003) observes that the factors which influence teachers to use information technology are availability of equipment (media resources), promise of improved student learning, funds to purchase materials, compatibility with subject matter, advantages over traditional methods, increased student interest, ease of use, time to learn, comfort level in the technology and university training in the technology.

Organizational Factors

Organizational factors are those factors within the institution which either support or discourage the use of media resources. The study, therefore, sought to establish organizational factors which influenced the use of media resources. This question was analyzed using the mean values to identify the rank for each attribute. As a result, University integrating media

resources in its programmes was given the first priority by respondents. From the results, University integration of media resources in its programmes was ranked first with a mean value of 3.89, University budgeting for media resources was ranked second (3.74), size of the University was third (3.62), University having media resource use Policy was fourth (3.53), training of support Staff on media resources was fifth (3.52), University management was ranked sixth (3.36), University making compulsory the use of media resources was seventh (3.10), University hiring support for lecturers and University having quality media resources were ranked eighth (3.00) while provision of space (Labs and Rooms) for media resources by the University was ranked ninth (2.82). In addition, it was established that University integrating media resources in its programmes, University budgeting for media resources, size of the University, University having media resource use Policy and training of subordinate staff on media resources influences the use of media resources in the school. When the University integrates media resources in its programme, it will become a habit whereby every person will be using media resources and hence, encouraging its use by all teaching staff and students. Therefore, budgeting for media resources is a noble idea towards the use of media resources in the university. Moreover, having media resources use policy helps to encourage the use of media resources as well as their maintenance. It was also established that leaving lecturers alone to fix and set media resources (projected) is time consuming and discouraging. Therefore, the university training more support staff to give assistance to lecturers will positively influence the use of media resources.

However, respondents were not categorical on whether or not University management, University making Compulsory the Use of media resources, University hiring support for lecturers, University having quality media resources and provision of space (Labs and Rooms) for media resources by the University influences adoption of media resources. This was evidenced by mean values ranging from 3.36 to 2.82 which show "Not Sure" on the Likert Scale. For instance, people should not be forced (making compulsory the use of media resources) to use media resources since majority of them may develop negative attitudes towards media resources. Instead, they should be educated on the importance of adopting and using media resources in the learning environment. Moreover, hiring of support staff alone is not enough; lecturers should also be given training on the operation and use of media resources so as to instil confidence in them when using media resources in class. A close scrutiny of the above factors indicates that University integrating media resources in its programme, University budgeting for media resources, size of the University, University having media resource use Policy and training of support Staff on media resources influences the use of media resources in the school. This is supported by WFME (2003) which recommends that medical schools must have policies which address the evaluation and effective use of media resources in academic programmes. Again, the Moi University Act (1985) and the Commission for Higher Education Standardization, Accreditation and Supervision Rules (1989) emphasize the need for adequate media resources, including the physical facilities and strategic planning. In addition, Kafu (1976), Spence and Humphrey (2005) recommend the same need for providing adequate media resources in training institutions.

Technological Factors

Respondents were asked to rank technological factors influencing the adoption and usage of media resources. This question was analyzed by using the mean values to identify the rank for each attribute. From the responses, cost of media resources was ranked first with a mean value of 3.61, complexity was ranked second (3.57), relative advantage was third (3.49), compatibility was ranked fourth (3.32) while image was ranked fifth (2.81). From these results, it may be concluded that cost, complexity and relative advantage were technological factors influencing the adoption and usage of media resources in the school. The cost of acquiring media resources determines whether to adopt or not. High costs will automatically discourage media resource consumers. When costs are high, the University may purchase only few media resources which may not be adequate to cater for the demand of its population. Hence, students' and lecturers' exposure to media resources will be limited which negatively influence media resource adoption. Moreover, complex and highly sophisticated media resources also discourage adoption because people, including the staff and students, should be trained first before operating and using the media resources. Less complex media resources are simple to operate and use which positively influences its adoption in the University. In addition, Mayer (2002) argues that the act of building connections between verbal and pictorial mental models is an important step in conceptual understanding. A close scrutiny of the above factors indicates that cost, complexity and relative advantage were technological factors influencing the adoption and usage of media resources in the University.

In conclusion, it was established that exposure to media resources due to its availability, accessibility and educational level, promote adoption and usage of media resources. It was also established that literacy and knowledgeability on media resources influenced adoption. Training raises the level of confidence of the media resource user thus, positively influencing adoption of media resources. Personal preference, age and personal attitudes were also other factors that influenced the adoption and usage of media resources in the school. The study further established that University integration of media resources in its programme and University budgeting for media resources enhanced availability and accessibility. The study further established that size of the University, University having media resource use policy and training of support staff on media resources influenced the adoption and usage of media resources in the school. Concerning technological factors, it was established that cost (high cost discourages adoption of media resources), complexity brought about by sophistication level and relative advantage were among the technological factors influencing the adoption and usage of media resources in the School of Public Health. Ranking of Factors that Influence the Use of Media Resources When respondents were asked to rank factors that influenced the use of media resources in the School of Public Health, technological factors were given the first priority. Further results showed that technological factors were ranked first with a mean value of 2.73, individual factors were ranked second (1.82) while organizational factors were third (1.50). As a result, it was established that technological factors played a vital role towards usage of media resources. It is through individual initiatives that media resources are

budgeted for and acquired. Moreover, it is through organization factors and sound policies that media resources are adopted and used. However, the study established that organizational factors played a minor role in influencing the use of media resources in the School of Public Health.

CONCLUSIONS

This paper has first discussed the type of media resources used in instruction at the School of Public Health. It was established in the study that the School uses several projected and non-projected media resources. The use of projected media resources was still very low due to limited knowledge and skills used in operating them. However, it was established that projected media resources were not frequently used. This may have been brought about by the lack of experts to run the media resources and the high capital required to own the projected media resources. On the other hand, non-projected media resources were frequently used because they are simple to operate. It was further established that projected media resources were not easy to maintain. This follows the fact that most of them were complex and sophisticated in nature and therefore, a technician or an expert was required for efficient maintenance of projected media resources. It was also established that respondents were not competent in operating projected media resources. Supporting this finding, Russel (1985) recommends that lecturers should be oriented in media operations and also constantly use them in-order to perfect the skill. This paper has also examined the factors influencing the use of media resources in the School of Public Health. It was established in the study that individual factors of exposure to media resources due to availability, accessibility and educational level influences the rate of using media resources. It was also established that literacy and knowledgeability on media resources influences their use. Training raises the level of confidence of the media resource user thus, positively influencing use of media resources. Personal preference, age and personal attitudes were also other factors that influence the use of media resources in the School of Public Health. The study further established that organizational factors such as University integration of media resources in its programmes and University budgeting for media resources enhance availability and accessibility of media resources. The study further established that size of the University, University having media resource use Policy and training of lecturers on media resources influenced the use of media resources in the school. In addition, it was established that technological factors, such as the high cost (high cost discourages use of Media resources) and complexity brought about by sophistication level plus relative advantage, all were among the technological factors influencing the use of media resources in the School of Public Health. Following the above findings, it can be concluded that Technological, Individual, Organizational and factors influence the use of media resources in the School of Public Health.

RECOMMENDATIONS

From the foregoing study and discussion, this paper recommends that the School of Public Health of Moi University should formulate sound procedures which will guide the procurement, use and maintenance of media resources and the establishment of Instruction media centre.

This may be done through a workshops sponsored by the school where Educational media specialists are invited.

REFERENCES

Ajuong, G. A. 2003. Computer and Internet Use by First-year Clinical and Nursing Students in a Nigerian Teaching Hospital. *BMC Medline Inform Decis Mak.* sept.18, 3(1): 10.

Amri, M., Ngatia, P. and Mwakilasa, A. O. 1993. A Guide for Training Teachers of Health Workers. Nairobi: AMREF/ DSE. Nairobi P.102-112.

Brusca, F. 1995. Technology –Based Instructional Media: A Primer for Trainers. Experts Only. The Linton Training Source Book. Hopkins. MN Linton Company.

Chandler, T. 2005. An Assessment of the Integration Level of Computer Technology in Communication Studies at Baptist Colleges and Universities. Doctoral Dissertation Unpublished Texas Tech University.

Cottrell, R. R., James, T. G. and James, F. M. 1999. *Principles and Foundation of Health Promotion and Education*. Allyn & Bacon A. Viacom Company. p. 107.

Curriculum for the B.Sc. degree in Environmental Health. Moi University. July 2004.

Curriculum for the B.Sc. degree in Nursing. Moi University. April 1999.

Erickson, C. W. H. 1968. Administering Instructional Media Programmes. NEW YORK: Macmillan Publishing Company. Inc. New York. p. 23, 601.

Fletcher, D. 2006. Technology Integration. Do they or don't they? A Self Report Survey from Break-through 5th grade Professional Educators. *AAC Journal*, 14(3): 207-219.

Gladhart, M. 2001. *Models*. Online at: http://education. wichitaedu/m3/models/teachered/integrationgrid.htm.

Gerlach, V. S. and Donald, P. Q. 1971. Teaching of Media. A Systematic Approach. Arizona State University. P.281.

Guide to the Faculty of Health Sciences. Moi University. March, 1999.

Instructional Media design. ESE 6939. Mullally html.@www coe.ufl.edu. 2005.

Instructional Media http://.www.auf.fsu.edu. Accessed on 7/7/06 at 3:00pm. 2001.

Kadzera, C. 2005. Use of instructional technologies in teacher training colleges in Malawi. Unpublished Doctoral dissertation. Virginia Polytechnic University.

Kafu, P. A. 1976. Analysis of the elementary school teachers rationale concerning the use of instructional media in elementary school teaching, in Bungoma District and Eldoret Municipality. Master of Education (M.Ed) Unpublished Thesis University of Nairobi.

Kamuri, K. 2007, July 22. Business Technology Multimedia Tools. *The Standard Newspaper.* Standard Media Group, Kenya.

Kamuri, K. 2007, November 18. Google Partnership with KENET. *The Standard Newspaper.* Standard Media Group, Kenya.

GoK 1985. *Kenya Gazette Supplement No. 46 of 14/7/85 – University Act.* Nairobi: Government Printer.

GoK 1989. *Kenya Subsidiary Legislation.* The Universities (Establishment, Standardization, Accreditation and Supervision) Rules. L.N. 56. p. 96, 98.

Mayer, R. E. 2002. Multi-media Learning. Cambridge University Press. p. 63.

McGaghie *et al.* 1978. Competency-Based Curriculum Development in Medical Education. WHO. Geneva. p. 57, 281.

Microsoft Encarta Reference Library Definition. 2002.

Moi University: Minutes of Faculty Board Meeting and External examiners Report of 30/11/05.

Moi University Calendar*, p. 9; Eldoret; Kenya. 2003.

Momanyi, L., Norby, R. and Strand, S. 2006. The need for integration of technology in K-12 school settings in Kenya, Africa. *AACE Journal*, 14(2): 154-174.

Mutema, A. M. and Ngatia, P. 1992. Management Theory and Practice. KHLM Project (Unpublished). Nairobi; Kenya.

Mutema, A. M. *et al.* 1992. Curriculum Development and Change. A systematic Approach. (KHLM project). Ministry of Health. Nairobi. Kenya.

Mutema. A. M., Kangethe, S. and Naweya, V. 1992. *Innovative Medical Education.* Egerton University Press. p. 67.

Mutema, A. M. 1992. Principles and Practice of Problem-based Learning. AMREF. Nairobi; Kenya.

Nafuko F. M. (2002). *Training of Trainers Strategy for the 21ˢᵗ Century*. Moi University.

Ndiku, L. 2003. The Problems Encountered by School Personnel in the Implementation of Computer Use in Uasin Gishu District. M.Phil. Unpublished Thesis, Moi University, Eldoret.

Omwenga, E. I. and Rodrigues, A. J. 2006. Towards an Education Evaluation Framework:

Synchronous and Asynchronous E-learning Cases. *Journal of the Research Centre forEducational Technology,* Spring 2006. http://www.rcet.org.

O'Neal, A. F. *et al.* 2003. An Introduction to Instructional Systems Design. ILO. Asian and Pacific Skills Development Programme. UNO. Goa.

Republic of Kenya, 1985. *University Act.* Nairobi: Government Printers.

Republic of Kenya, 1989. Universities (Establishment, Standardization, Accreditation and Supervision) Rules. Nairobi: Government Printer.

Rogers, E. M. 1995. Diffusion of Innovations (4ᵗʰ ed.). New York: Free Press.

Russel, A. L. 1985. How media materials are used in University Instruction. *Australia Journal of Education Technology,* 1(1): 47-58, Brisbane.

South, J. B. 2000. Brigham Young University: Centre for Instructional Designs. Internet Web. http:// www reusability. Org/read/chapters/South doc.

Spence, M. and Humphrey, M. 2005. Issues and Challenges of Instructional Technology Specialists in Alberta Colleges. *Canadian Journal of Learning and Technology,* 31(1). Winter/hiver 2005.

WFME, 2003. Basic Medical Education WFME Global Standards for Quality Improvement. University of Copenhagen. Demark.

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